

OHMSETT TEST PLAN
(Schedule B)

TITLE: Offshore Boom Tests With Oil (Newfoundland)

TECHNICAL
APPROACH:

A. PROBLEM STATEMENT

A protocol for acquiring data from a boom for analysis of seakeeping has been developed at OHMSETT. Prior to releasing the protocol to the general public, OHMSETT personnel must gather data from a boom actually containing oil in the open ocean to demonstrate the validity of the methods.

B. TECHNICAL PLAN

A boom will be instrumented with pressure transmitters at OHMSETT and shipped to Canada. The purchasing and installation of the boom will be conducted under a separate OHMSETT Work Assignment. The second Work Assignment will be funded separately. The boom will be deployed and used to contain oil while data is collected. The oil will then be released for additional testing. Data will be reduced in accordance with established procedures. The distribution and collection of the oil will be conducted by the Canadian Coast Guard.

C. MILESTONES

DATE

1.	Submit Work Assignment to PO & TPM	26 DEC 86
2.	Mail Contract to Canada	26 DEC 86
3.	Receive EPA Approvals	26 JAN 87
4.	Receive Final Contract	26 JAN 87
5.	Instrumented boom received Newfoundland	14 MAY 87
6.	Inspection trip	15 MAY 87
7.	Test boom in Newfoundland	20 MAY 87
8.	Submit overview on field tests	20 JUN 87
9.	Submit final report on field tests	14 SEP 87

Proj. # 109

D. TRAVEL

It is anticipated that a significant amount of travel will be associated with the execution of this plan. As a minimum, there will be three separate trips.

1. Planning Trip.
2. Equipment Inspection
3. Test Execution

E. QA PLANS

The QAPP developed under OHMSETT Work Assignment 87160 will be applied to this testing. There are no claims presented on data collected by others that is necessary to final data reduction.

Canadian		1986		1987																						
		DEC		JAN		FEB		MAR		APR			MAY		JUN		JUL		AUG		SEP					
		8	22	7	21	4	19	5	19	2	16	30	14	29	12	26	10	24	7	21	7					
		0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190					
1	Begin Work Assignment	†	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2	Write Test Plan - Contract	=	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Mail To Canada	.†	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
4	Mailing Time	.-	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
5	Received Canada	.†	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6	Canadian Review	.-	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7	Mailing Time	.-	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8	M & H Receives	.†	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
9	M & H Reviews	.-	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
11	Submit to USEPA	.†	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
12	USEPA Review	.>==>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
13	USEPA Approval	.†	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
10	Contract Signed	.X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
14	Status Review Meeting	.	.	=	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
15	Status Review Meeting	.	.	.	.	.	.	=	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
16	Inspection Trip	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
17	Receive Announcement of "60"	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
18	Final Preparations	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
19	Travel	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
20	Set Up Day	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
21	Trail Run Day	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
22	Test Day	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
23	Wait Contingency	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
24	Cleanup/repack	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
25	Return	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
26	CCG Ships Boom	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
27	Boom in transit	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
28	Begin Data Reduction	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
29	Data Reduction	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
30	Overview Preparation	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
31	Mail Overview to Sponsors	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
32	Write Final Report	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
33	Mail Draft to Sponsors	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
34	Wait on Sponsor Comments	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
35	Receive Sponsor Comments	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
36	Write Final Draft	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
37	Submit Final Draft	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
38	Receive Boom Shipment	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
39	Unpack Equipment	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
40	Return Boom to manufacturer	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41	Work Assignment Complete	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.X

LEGEND: >::> Finished >==> Critical
 >-> Noncritical >---> Baseline
 † Milestone X Terminator

Instrumentation

Eight pressure transmitters will be mounted near the bottom of the barrier. If the Globe International oil fence is selected as the test boom the transmitters will be mounted on the vertical stiffeners. If another barrier is selected, a similar mounting technique will be used. In addition to the pressure transmitters, one strain link will be installed in the towing bridle.

Data Recording

Analog signals will be recorded using the ISAAC 2000 digitizing computer interface. The digitized data will be written to disk for on scene analysis. The input will also be recorded using the Sea Data digital recorder. The tape from this recorder will be sent out for tape-to-disk conversion and reprocessing as necessary.

Data Analysis

Data will be recorded in blocks for Fourier analysis after standard statistical procedures. The analysis will generate immersion or spectra similar to those shown in Figure 1. The sample spectrum was generated using data collected in the OHMSETT test tank. In these spectra, each peak represents a non-conformance region. The higher the peak, the greater the non-conformance. The non-conformance is measured at the frequency shown on the graph as the "x"-coordinate.

Test Duration

The barrier under test will be used for 2.5 hours of oil holding and data collection. During that period seven sets of data will be collected using the ISAAC 2000. At the end of this period, the vessels will intentionally entrain oil. One data collection session will occur during the entrainment period.

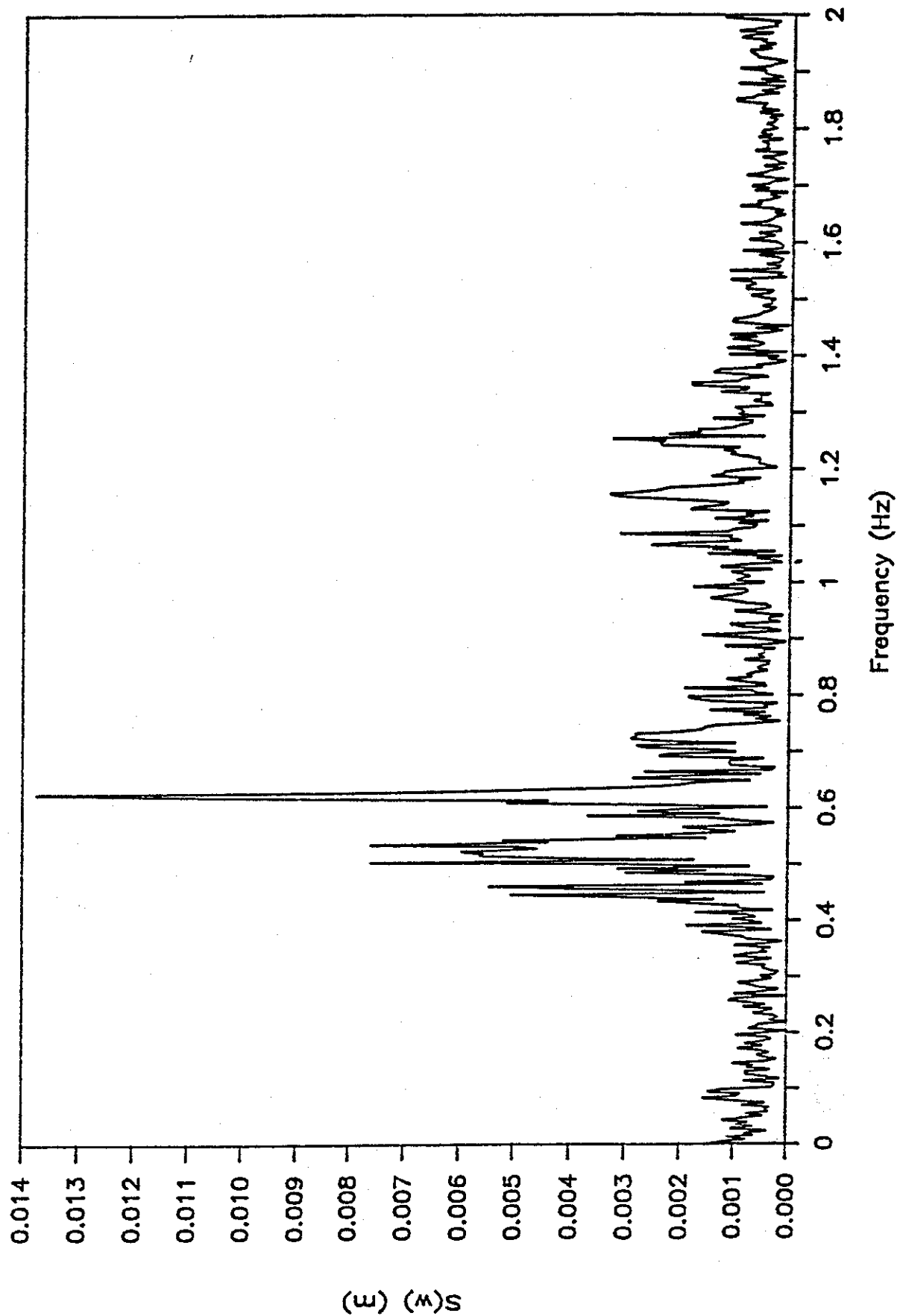
Oil Collection Data

The Sport-team equipment will be used to make measurements of the oil collected in later phases of the test program not directly related to the measurements of seakeeping of the test barrier. The oil collection data will provide estimates of Recovery Rates and Recovery Efficiency over time. In order to obtain the necessary data, a Venturi-type flow meter will be installed in the 6-inch skimmer discharge hoses with a pressure gauge and sampling port.

Photo/Video Documentation

The photo/video (P/V) documentation will cover all phases of the program. The emphasis of the records will be a video record of the events of both the trial run and the actual test. The video record will be edited into a no-sound 20-minute video record after returning to OHMSETT. This tape will include the video taken from the vessels and whatever other video is available from external sources.

Test 67 P1 Magnitude Spectrum



PHOTO/VIDEO PLAN
Schedule B

Date 10-8-86

To be completed and signed before the start of test.

APPROVED:

Photographer R. A. Dickson

OHMSETT Test Engineer Mike Borst

User's Representative Harry Whittaker

Phone Number 1-613-998-9622

Address Environmental Emergencies Technology Division

Technical Services Branch- Environmental Protection Services

Series River Road Laboratories, Ottawa, Ontario K1A 1C8 CANADA Job Number WA 87-145

Dates from March-May 1987 ~~xx~~ or September-November

Requested Photography

Quantity	Procurement	Processing
<u>NA</u> ft 16mm Movies	\$ <u>-</u>	\$ <u>-</u>
<u>10</u> rolls 35mm Slides	<u>60.00</u>	<u>65.00</u>
<u>5</u> rolls 35mm B&W prints	<u>15.00</u>	<u>70.00</u>
<u>10</u> rolls 35mm color prints	<u>50.00</u>	<u>150.00</u>
<u>-</u> other Report Processing		<u>150.00</u>
Subtotals	\$ <u>125.00</u>	\$ <u>435.00</u>

\$ 560.00

Requested Video

Quantity

Procurement

NA hrs 1" reel-to-reel

NA hrs 3/4" u-matic

10 hrs 1/2" VHS

\$ -

-

50.00

\$ 50.00

Subtotal

TOTAL

\$ 50.00

Standard films are 7247 ECN and 7241 EF. Specify desired type NA

List General areas of interest Overall operations and deployments.

Landed dock preparations, equipment used, resultant boom and skimmer operations.

Specify detail of particular view TBD

Specify underwater coverage NA

Specify special instructions TBD

Specify output (i.e., rough footage, no. of copies, etc). 35mm slides/prints and video
tape to become property of customer at end of project. One copy of edited video tape
also to customer at the end of the project.

Historical records documentation Select copies of 35mm slides and prints and one copy
of edited video tape to remain at OHMSETT.

Approximate cost for film \$ 610.00

CONTINGENCY 15% \$ 92.00

TOTAL Photo/Video Plan Estimate \$ 702.00

cc: Photographer
EPA Project Officer
Photo file
User's Representative
OHMSETT Test Engineer
Test Director